Docket No. AT9-98-071

CLAIMS:

What is claimed is:

1. A process in a data processing system executing a routine having a plurality of paths, wherein the routine has includes a plurality of first type instructions and wherein the data processing system executes second type instructions, the process comprising:

identifying a path within the routine that is being executed, wherein a plurality of first type instructions are associated with the path; and

translating the first type instructions for the path being executed, wherein first type instructions are translated into second type instructions for execution by the data processing system, wherein first type instructions for unexecuted paths remain untranslated.

2. The process of claim 1 further comprising:

executing second type instructions for a path in response to a loop back through the path during execution of the routine.

3. The process of claim 1, wherein translated instructions for the path are executed in an order and wherein the translated instructions are stored in execution order.

4. A process in a data processing system for executing a method having a plurality of paths, wherein the data processing system executes native machine code, the process comprising:

identifying a path within the method that is being executed, ~~wherein~~ a plurality of bytecodes are associated with the path; ~~and~~

compiling bytecodes for the path being executed, wherein the bytecodes are compiled ~~into~~ native machine code executed by the data processing system, wherein bytecodes for unexecuted paths remain uncompiled.

5. The process of claim 4 further comprising:

executing native machine code for a path in response to a loop back through the path during execution of the method.

6. The process of claim 4, wherein compiled instructions for the path are executed in an order and wherein the compiled instructions are stored in execution order.

7. The process claim 4, wherein a JIT station is used in compiling the method.

8. The process of claim 4, wherein a data structure is used during compiling of the method to store information about a path as the path is compiled.

9. The process of claim 8, wherein the data structure stores the native machine code.

10. The process of claim 9, wherein the data structure is a JIT station.

11. A process in a data processing system for executing a method having a plurality of paths in which each path with in the plurality of paths contains a number of bytecodes, the method comprising:

identifying the method that is to be executed; and

compiling the bytecodes into instructions for execution by the data processing system for each path within the plurality of paths as each path is executed.

12. The process of claim 11, wherein unexecuted paths within the plurality of paths remain in a bytecode form.

13. The process of claim 11, wherein the instructions have an execution order and further comprising:

storing the instructions in the execution order.

14. The process of claim 11 further comprising:

executing the instructions for a path within the plurality of paths in response to a loop back through the path during compilation of the method.

15. The process of claim 11, wherein a data structure is used during compiling of the method to store information about a path as the path is compiled.

16. The process of claim 15, wherein the data structure stores the instructions.

17. A data processing system for executing a method having a plurality of paths, wherein the data processing system executes native machine code, the data processing system comprising:

identification means for identifying a path within the method that is being executed, wherein a plurality of bytecodes are associated with the path; and

compilation means for compiling bytecodes for the path being executed, wherein the bytecodes are compiled into native machine code, wherein bytecodes for unexecuted paths remain uncompiled.

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18. The data processing system of claim 17 further comprising:

execution means for executing native machine code for a path in response to a loop back through the path during interpreting of the method.

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19. The data processing system of claim 17, wherein compiled instructions for the path are executed in an order and wherein the compiled instructions are stored in the execution order.

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20. The data processing system of claim 17, wherein a JIT station is used in compiling the method.

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21. The data processing system of claim 17, wherein a data structure is used during compiling of the method to store information about a path as the path is compiled.

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22. The data processing system of claim 21, wherein the data structure stores the native machine code.

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23. The data processing system of claim 22, wherein the data structure is a JIT station.

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24. A data processing system comprising:

a method having a plurality of paths in which each path within the plurality of paths contains a number of bytecodes;

identification means for identifying that the method is to be executed; and

compilation means for compiling the bytecodes into instructions for execution by the data processing system for each path within the plurality of paths as each path is executed.

25. The data processing system of claim 21, wherein unexecuted paths within the plurality of paths remain in a bytecode form.

26. The data processing system of claim 21, wherein the instructions have an execution order and further comprising:

storing means for storing the instructions in the execution order.

27. The data processing system of claim 21 further comprising:

execution means for executing the instructions for a path within the plurality of paths in response to a loop back through the path during compilation of the method.

28. The data processing system of claim 21, wherein a data structure is used during compiling of the method to store information about a path as the path is compiled.

29. The data processing system of claim 28, wherein the data structure stores the instructions.

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30. A computer program product for executing a method in a data processing system, wherein the method has a plurality of paths in which each path with in the plurality of paths contains a number of bytecodes, the computer program product comprising:

first instructions for identifying that the method is to be executed; and

second instructions for compiling the bytecodes into compiled instructions for execution by the data processing system for each path within the plurality of paths as each path is executed.

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31. The computer program product of claim 30, wherein the compiled instructions have an execution order and further comprising:

third instructions for storing the compiled instructions in the execution order.

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32. The method of claim 30 further comprising:

third instructions for executing the compiled instructions for the path within the plurality of paths in response to a loop back through the path during compilation of the method.